

lines rather coarse and irregular, the entire surface covered with low, coarse, rather distant radial striae extending to the edges.

Length 3.5, width 2.5, alt. 1 mm.

Types, (No. 43454 Coll. Walker), from Butting Ram Shoals, Coosa Co., Ala., collected by H. H. Smith. Cotypes in the collections of T. H. Aldrich, George H. Clapp and John B. Henderson.

All of the specimens were found on living *Pleuroceridae*.

This beautiful little species, which groups with *rhodacme* in its depressed shape and spine-like apex as well as in its radular characteristics, differs from it in its small size, more regularly oval shape and the greater development of radial striae over the surface.

It is named in remembrance of the late Rev. Prof. H. M. Gwatkin of Cambridge, England, to whom I am indebted for practically all of the radula preparations used in this paper and who was the first to observe and point out the remarkable character of the radula in the different species of the genus.

I am indebted to Dr. Pilsbry for the slide representing the radula of *Lanx patelloides*. All of the other radulae figured were prepared by Prof. Gwatkin, and all of the figures were drawn by Mrs. Lydia M. H. Green formerly connected with the U. S. National Museum.

A NEW SPECIES OF ASTARTE FROM ALASKA.

BY WILLIAM HEALEY DALL.

In 1865 Dr. Philip Carpenter described from a single specimen a species of *Astarte* from Puget Sound, to which he gave the specific name of *compacta*. This type remains in the collection of the National Museum as number 4509.

This species has remained extremely rare, only three or four others, some eroded and doubtful, have come to hand during the half-century which has passed. This is probably due to the fact that the right locality had not been dredged, for the

species of this genus are usually very abundant in their chosen places.

Recently Mr. G. Willett, warden of the Forrester Island reservation in southern Alaska, has succeeded in getting an excellent shell-collection at this isolated spot; among the shells thus obtained was a good series of *Astarte compacta*. With this, and for a time confused with the latter, is what seems to be a new species of *Astarte*, which Mr. Willett in arranging his collection was the first to discriminate. He had the kindness to send me his fine mounted series of both species for examination, the result of which is not only that a new species is identified, but it is shown that *A. compacta* as well as the new form belong to the typical section of the genus, both forming at intervals crenulation of the inner margin of the valves. The only specimens of *A. compacta* previously available happened to be in the stage without crenulations.

The new form is best described by a comparative diagnosis.

ASTARTE WILLETTI, n. sp.

Shell small, of a yellowish-brown externally, milk-white internally; the external sculpture of small concentric waves is more regular and constant than in *compacta*; the form is more oval and the beaks more anterior than in that species, and *willetti* appears to attain a larger size. In *compacta* the lunule is relatively narrower and longer than in the new species. In the interior the hinge of the latter is better developed than in *compacta*, all three teeth being usually represented, while in *compacta* the posterior and particularly the anterior cardinal is frequently obsolete or absent. The shell substance of *A. compacta* is more translucent and bluish, and the crenulations of the valve margin when present are distinctly smaller and less conspicuous than in *willetti*.

The measurements of two forms are as follows, the largest specimen of a series of some twenty-five specimens being selected in each case.

	Height.	Length.	Diameter.
<i>A. willetti</i>	14	16	8 mm.
<i>A. compacta</i>	12	12	6 mm.

The specimens were dredged in about 50 fathoms. The umbones in *A. willetti* are 6.0 mm. behind the anterior end of the shell; in *A. compacta* about 5.5 mm., the result being that the latter has a more triangular outline. The type of *A. willetti* is number 216364 of the catalogue of mollusks of the U. S. National Museum.

NOTES ON BOREAL LAND AND FRESHWATER SHELLS.

BY WM. H. DALL.

The National Museum has received a small lot of fresh-water shells from Dr. T. E. Winecoff, stationed at Fort Yukon, Alaska, nearly on the Arctic circle, which are of more than ordinary interest. They were collected from a small pond near the fort and the large *Lymnæa* abounded in such numbers as to give a pinkish tint to the water in which they were, according to the collector. The species are:

Lymnæa appressa Say, rather small for the species, and of a brownish tint not unlike the usual color of *L. palustris*.

Lymnæa palustris Müller. Ordinary type and size.

Lymnæa emarginata mighelsii Binney. Not known so far northwest.

Planorbis trivolvis Say, medium size, abundant.

Planorbis crista Linné, one specimen. Nearest known locality is Carberry, Manitoba.

Pisidium vesiculare Sterki, one specimen.

During a cruise in Bering Sea last summer, Mr. G. Dallas Hanna touched at St. Mathew Island in the northern part of Bering Sea. From small ponds in the island he obtained the following species:

Aplexa hypnorum Linné.

Planorbis parvus Say.

Valvata mergella Westerlund.

Pisidium scutellatum? Sterki.

Succinea chrysis Westerlund.